

REMARKS

Applicant has cancelled claim 6, amended claims 8 and 13, and added new claim 15. Accordingly, only claims 8, 10 and 13-15 remain in the application, of which none have been allowed.

New claim 15 is somewhat similar to now-cancelled claim 6 which was rejected as obvious over Hewson (3,307,541) in view of Kuroiwa (JP411,301,484A). Claim 15 describes apparatus for applying compressions to the chest of a patient, such as shown in applicant's Fig. 2. The apparatus includes an actuator for applying compression pulses and a torso wrap that wraps to the back of the patient. The actuator includes a cylinder (60) and a plurality of telescoping piston parts (64, 66) that telescope in one another and that are exposed to pressured air in the cylinder. The lowermost piston part (66) has a lower piston inside surface (74) exposed to the pressured air. The lower piston inside surface (74) has at least half the diameter of the inside surface of the cylinder (60). This assures that the actuator can apply a large force to the patient's chest, along the entire stroke (90) of the piston.

Hewson shows, in his Fig 1, an actuator 14 which appears to include a single piston. Kuroiwa shows an actuator for opening and closing a gate, which includes multiple telescoping pistons. His last piston has a diameter (measured in his Fig. 2 as 4 mm) which is much less than the inside diameter (15 mm) of his cylinder inside surface. As a result, his lowermost piston part can apply only a small force. This could be compensated for by applying a high pressure to his cylinder, but then his first cylinder part would apply a very high force. If there is only a small distance to the patient's chest, then his first cylinder could apply such a high force that it would injure the patient.

Claim 8, which has been amended, was rejected as obvious over Waide (5,399, 148). Claim 8 describes a stabilizer (e.g. 150 in Fig. 1) for a chest compressor. The stabilizer has legs with ends that lie respectively closer to the head and legs of the patient and ends that lie closer to opposite sides of the

patient than the pressing member. This prevents the actuator from tipping towards the head or legs or toward either side of the patient, and injuring the patient.

5        Waide's Fig. 2 shows a chest compressor 1 with a cylinder and piston, where the piston depresses a block 2 against a patient's chest. He also shows a support means with legs 3 at opposite sides of a block. His Fig. 1 shows that his block 2 lies just as far from the patient's legs as the opposite sides 3 of his support lie from the patient's legs. If his support were turned 90°, then his block 2 would be just as far from the opposite sides of the patient as his legs 3. Waide does not use a wide support that stabilizes his actuator against tipping in any direction, as is described in claim 8.

10        Claim 10, which depends from claim 8, describes a stabilizer as comprising a saucer-shaped element that extends more than 180° about the vertical axis of the actuator. In Waide, each leg 30 of his stabilizer appears to extend by no more than 60°, so his stabilizer extends 120° rather than more than 180°. By extending more than 180°, applicant prevents the actuator from tilting in any direction.

15        Claim 13, which has been amended, describes the outer end of the stabilizer as being spaced further from the axis than the presser, in every horizontal direction to limit tilt of the compressor assembly in every tilt direction. As discussed above in the case of claim 8, the legs 3 in Waide are not spaced further from the axis of his block 2 in every direction.

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In view of the above, favorable reconsideration of the application is  
courteously requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "L. D. Rosen", written in a cursive style.

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Claim 8 (Amended Twice)

8. Apparatus for applying compressions to the chest of a patient to stimulate blood circulation, comprising:

an energizable compressor assembly which includes an actuator that has a vertical axis that extends perpendicular to the patient's chest, and a pressing member for pressing against the patient;

a torso wrap that couples to said actuator and that wraps to the back of the patient, so downward forces of the pressing member against the patient's chest are withstood by upward forces applied to the patient's back;

a stabilizer that includes a plurality of leg portions that each has an inner end connected to said actuator and an outer end that is positioned to press against the front of the patient, with said outer ends spaced about said axis to minimize tilt of the actuator with respect to the patient's front;

said outer ends of said stabilizer leg portions are spaced further from said axis than any part of said pressing member that presses against the patient's chest, said outer ends including [first and second] ends that lie respectively closer to the head and legs of the patient than said pressing member and ends that lie closer to opposite sides of the patient than said pressing member.

Claim 13 (Amended Once)

13. Apparatus for applying compressions to the chest of a patient to stimulate blood circulation, comprising:

an energizable compressor assembly which includes an energizable actuator that has a pressing member that is pushed against a chest location on the patient's chest;

a torso wrap that couples to said actuator and that wraps to the back of the patient, so downward forces of the pressing member against the patient's chest are withstood by upward forces applied to the patient's back;

10 a stabilizer that includes a plurality of leg portions that each has an inner end connected to said actuator and an outer end that is positioned to press against the front of the patient, with said outer ends spaced about said axis to minimize tilt of the actuator vertical axis[, a first of said outer ends lying primarily upward, toward the patient's head, of said pressing member and a second of said outer ends lying primarily downward, toward the patient's legs, of said pressing member.];

15 said pressing member having an axis and said stabilizer leg portion outer ends being spaced further from said axis than said presser in every horizontal direction to limit tilt of the compressor assembly in every tilt direction.

New Claim 15

~~15~~ Apparatus for applying compressions to the chest of a patient to stimulate blood circulation, comprising:

an energizable compressor assembly which includes an actuator and a source of pressured fluid;

5 a torso wrap that couples to said actuator and that wraps to the back of the patient, so downward forces of the piston against the patient's chest are withstood by upward forces applied to the patient's back;

10 said actuator includes a cylinder which has an inside surface which is coupled to said torso wrap and a piston with a plurality of telescoping piston parts that telescope in one another and that are exposed to pressured fluid in said cylinder, including an upper piston part that fits closely in said cylinder and a lowermost piston part, and including a pressing member on a lower end of said lowermost piston part for pressing against the patient's chest;

15 said lowermost piston part having a lower piston inside surface which is exposed to said pressured fluid and which has at least half the diameter of said inside surface of said cylinder.